



January 6, 1975

VIA CERTIFIED MAIL

Earl W. Yeagley, Jr.
Associate General Counsel and
Assistant Secretary
Miles Laboratories, Inc.
Elkhart, Indiana 46514

Dear Mr. Yeagley:

Re: Classification of Calcium Sulfate

This is in response to your letter of December 9, 1974, in which a request was made for exclusion from Regulation SPC 18 for the calcium sulfate generated by your operation.

We have reviewed both the information received in written form and that which was relayed through conversations with various representatives of Miles Laboratories, Inc. This also includes the latest laboratory results as submitted on December 20, 1974, by Mr. Paul D. Francis, Manager, Process and Quality Control, Citric Manufacturing of Miles Laboratories, Inc. In addition, we have consulted with members of the laboratory staff at the State Board of Health.

It is our determination that the calcium sulfate as generated from your citric acid process cannot be excluded from Regulation SPC 18 under Chapter IX, Section 1. This decision is also based in part on information which was included in your report on the properties of calcium sulfate as received on December 9, 1974, by our office.

The solubility of calcium sulfate varies appreciably with changes in pH and other electrolytic conditions to which it is exposed. The solubility is known to increase substantially under acidic conditions which are often similar to those found in leachate generated from landfill operations which dispose of degradable wastes. Although the leachate generated from the calcium sulfate alone may not be defined as having a toxic effect on a groundwater supply, it may seriously alter the natural mineral properties of that water supply. Therefore, it is essential that care be taken to assure that the calcium sulfate is not exposed to conditions which would increase its solubility.

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It is feasible, however, to consider this material to be stable if kept near neutral p H . This would include separate disposal from organic wastes. Under these conditions, the calcium sulfate should be least soluble.

Conditions relative to disposal of calcium sulfate at the Himes site are:

1. Disposal in dry areas only.
2. Separate disposal from decomposable materials.
3. Protection from extremes of pH caused by natural or manmade sources.

If you have any questions, please refer them to the Solid Waste Management Section at AC 317/633-4393.

Very truly yours,

Roland P. Dove, Acting Director
Division of Sanitary Engineering
AC 317/633-4330

CAM/mc

cc: Franklin E. Breckinridge, Attorney
Mr. P. D. Francis, Manager
Process-Quality Control

tot 60% Fe

ANALYSIS mg/l

Sample	EC	CO	Fe	tot. Sol. Fe	Zn	Pb	Cd	Cr	Pt	Co	Ca	Mg	Cl	NO ₃	NO ₂	TP	TP	TP	TP	TP	TP
Rumfelt 1250x		18	4.6	4.7	.3	.01	0	0	0	0	91	37.3		0	0				90	0	
Wiseman 2405x	58	564	45.8	45.8	1.0	0	.7	.02	.2	.02	120	15.1	.6	9.0	1.2	7.8	0	3076	1039	30	0
Wiseman 3180x	46	60	.4	.4	.3	0	0	0	.1	0	53	17.2		0	0	0			10	0	
Kolan 425x	46	335	14.2	14.2	.8	0	.01	0	.2	.08	110	30.4		5.5	4.7	5	0		20	0	
Runoff 628x	0	7000	97.8	213	.3	.01	.01	.09	.02	0	356	195	1.45	290	240	50	0				
City water 6	--	--	1.4	2.6		0	0	0	0	0	35	9.3			0	0					
Rumfelt 760x		3												8.0	5.3	1.7			10	0	

In letter to E.P.A. from Roland O'Dowd he reports
this is what is normal or good water

1976 A) COD 12,000.0

B) Sulfates 350.0 ppm

C) total Chromium 6.0 ppm